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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/422,121      | 10/20/1999  | JAMES M. BARTON      | TIVO0004            | 5130             |

29989 7590 11/02/2005

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EXAMINER

BROWN, RUEBEN M

ART UNIT PAPER NUMBER

2611

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/422,121

Applicant(s)

BARTON ET AL.

Examiner

Reuben M. Brown

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-39,43-67 and 71-126 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39,43-67 and 71-126 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/24/05 has been entered.

### ***Response to Arguments***

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. Applicant's argument on page 27 that the previous Office Action misquoted the tense of the elements of the claims has been addressed. White teaches organizing multiple listings of a particular program.

*Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 8-9, 15-33, 36-37, 43-61, 64-65, 71-91, 93-104, 107-118 & 121-126 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ismail, (U.S. Pat # 6,614,987), in view of Rosin, (U.S. Pat # 6,028,600) and White, (U.S. Pat # 5,596,373).

Considering amended claims 1, 29 & 57, the claimed process for scheduling the recoding, storing and deleting of TV and Web page program material on a storage medium in a computer environment comprising the step of accepting as input a prioritized list of program viewing preferences reads on the disclosure in Ismail of the operation of the preference database 116, which contains the values of programming categories preferred by the subscriber, see col. 5, lines 34-67 thru col. 4, lines 1-27; col. 6, lines 1-67 & col. 9, lines 59-67 thru col. 10, lines 1-3.

The amended claimed feature of, “wherein the list contains a viewer’s explicit preferred program selections for recording and inferred program selections for recording”; is met by the disclosure of Ismail, col. 10, lines 15-31. The cited passage in Ismail teaches that with respect to recording TV programs, the highest priority is given to the programs specifically requested by

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the user for recording. The next highest priority is given to the programs that match particular category-value pairs specified by the user, and are thus inferred by the preference agent.

The additional claimed features of comparing the list with a database of program guide objects and generating a schedule of time versus available storage space that is optimal for the viewer's explicit or inferred preferred programs is met by the discussion in Ismail of automatically scheduling the recordation of programs that fit the preference criteria of the subscriber, wherein the system has identified sufficient storage space at the time(s) that the programs are available, (col. 2, lines 1-34; col. 9, lines 59-67; col. 10, lines 1-40). The above citation of Ismail explicitly discloses that the recording schedule is made for programs of the highest priority with respect to the storage capacity at the user device, which reads on the claimed, 'optimal for the viewer's explicit or derived preferred programs'.

As for the additionally claimed feature of the preferred programs including TV broadcast programs and URL's (i.e. web sites), Ismail does not disclose the use of the Internet. Nevertheless, Rosin provides a teaching of a system that presents a list of TV programs and/or web sites that correspond with a subscriber's usage history, (Abstract; col. 3, lines 10-23). In particular, it is disclosed that an intelligent agent passively filters TV and Web content based upon the subscriber's demographically based profile, which may be updated by the subscriber's viewing and/or browsing habits, see col. 6, lines 1-67; col. 7, lines 1-55 & col. 14, lines 22-45).

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It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Ismail with the feature of providing a list of Web content, as well as TV content based upon a subscriber's usage pattern, at least for the desirable improvement of providing the user with preferred programming lists from a wider range of sources, instead of being only limited to TV broadcast sources. Further, Rosin discloses that it is beneficial to combine access to both Internet and TV content from a single coherent interface, see col. 2, lines 3-15 & col. 2, lines 45-58. Therefore, the combination of Ismail & Rosin provides a system that presents list of TV programs and web sites to a user for recording based upon the subscriber's viewing/usage pattern.

As for the additionally claimed feature of the program objects indicating when programs of interest are broadcast, Ismail teaches attribute information 107, which represents potential programs of interest in the preference database 116 and includes categories such as start time and duration of the program, see col. 3, lines 42-50 & col. 4, lines 1-15.

Regarding the claimed feature of generating an order list of future showings of a specific program of interest, using the database of program guide objects, Ismail does not teach the claimed feature. However, White teaches providing a list of future showings of a particular program of interest, see Fig. 15A & 15B, col. 8, lines 4-54. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Ismail with the feature of providing a list future showings of a program of interest, as taught by White, at least for the

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desirable purpose of enabling the subscriber see and purchase a desired program at a more convenient viewing time.

The additionally claimed feature of checking each showing of space and input source conflicts, and only recoding the programs without conflicts, is consistent with the above cited teachings of Ismail, (col. 10, lines 1-14) and & Woods (Para 0038).

As for claims 29 & 57, the claimed apparatus and a program storage medium readable by a computer tangibly embodying a program of instructions executable by the computer that perform the steps of scheduling the recording, storing and deleting of TV and Web page program material comprise elements that correspond with subject matter mentioned in the rejection of claim 1, and are likewise treated.

Considering claims 2, 30, 58, 86, 100 & 114, Ismail teaches that the subscriber is enabled to request particular programs to be recorded, which are given the highest priority, col. 4, lines 32-34 & col. 10, lines 15-21.

Considering claims 3, 31 & 59, see Ismail, col. 2, lines 31-34 & col. 10, lines 21-31.

Considering claims 4, 32, 60, 87, 101 & 115, the viewer preferences are inferred from viewing patterns, and are generated by the preference agent 110, col. 3, lines 66-67 & col. 4, lines 13-26.

Considering claims 5, 33 & 61, the preferences are organized according to the content categories of TV programs in the database, col. 3, lines 65-67 thru col. 4, lines 1-20; col. 6, lines 35-67 & col. 10, lines 21-31.

Considering claims 8, 36, 64, 89, 103 & 117, the claimed subject matter reads on the disclosure in Ismail that the programs that match user specified category-value pairs have a middle priority, and therefore lose conflicts with programs that explicitly selected by the user, which have the highest priority, see col. 2, lines 19-27; col. 10, lines 15-31.

Considering claims 9, 37, 65, 90, 104 & 118, the claimed subject matter reads on the disclosure in Ismail that if the highest rated program requires one hour of storage time, but only thirty minutes are available on the storage devices 106, then the one hour program is skipped, and the highest rated thirty minute program is recorded. This teaching of Ismail, reads on recording programs if at all times between the beginning and ending of the program, there being sufficient storage space to hold it.

Considering claims 15, 43 & 71, Ismail discloses that the list of programs to be recorded of programs of interest is from highest priority to lowest priority, col. 10, lines 1-31, However, Ismail does not teach that the viewer is presented with any conflicting programs being in order from least impact on the scheduled programs. Official Notice is taken that at the time the invention was made, presenting items in a list according to least to most was known in the art. It

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would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Ismail, with the well-known technique of ordering a list from least to most.

Considering claims 16, 26, 44, 54, 72, 82, 96-97, 110-111 & 124-125, Ismail does not discuss the user or the system enabled to change the expiration time of a recording. Official Notice is taken that at the time the invention was made, it was known in the art to manipulate scheduling or broadcasting of programs. It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Ismail, with the known technique of manipulating the scheduling/broadcast or reception of programs, at least in order to enable recording of the program, thereby overcoming a conflict, and satisfying the customer. As for claims 26, 54, & 82, one would have been motivated to manipulate a program expiration time only to the time needed, since more reduction would potentially cause the program to lose a conflict with a different program, that has an expiration period within the instant program's.

Considering claims 17, 21, 45, 49, 73, 77, 95, 109 & 123, the claimed subject matter reads on the user in Ismail choosing to delete scheduled recordings that have conflicts, col. 10, lines 58-63.

Considering claims 18-20, 46-48 & 74-76, the claimed background scheduler that schedules and records programs in a list reads on the operation of Ismail, wherein the recording manager 112, schedules a list of programs to be recorded, see col. 9, lines 59-67 & col. 10, lines 1-14. Regarding claims 20, 48 & 76, only those programs that survive the conflict programs at a

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particular time are recorded. Thus if a program is recorded at a particular time, then necessarily there were no more remaining conflicts with any other programs.

Considering claims 22-23, 50-51 & 78-79, Official Notice is taken that at the time the invention was made, it was well known in the art to provide users with an immediate status of system. It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Ismail with the well known technique of providing a user with immediate status of the system, at least for the desirable benefit of enabling the user to resolve conflicts as quickly as possible.

Considering claims 24, 52 & 80, Official Notice is taken that at the time the invention was made, it was known in the art of GUI technology to provide users with a prompt requesting an action or alternative action. It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Ismail with the well-known technique of prompting a user with a GUI message in order to illicit action, at least in order to bring a particular conflict to the user's attention, avoiding the user having to manually look for the conflict, which saves time.

Considering claims 25, 53 & 81, see Ismail, col. 2, lines 21-26 & col. 10, lines 15-32.

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Considering claims 27, 55 & 83, the claimed subject matter is met by Ismail, col. 2, lines 21-26 & col. 10, lines 15-32, which teaches that conflicts are resolved according to their priority, which reads on preference weighting.

Considering claims 28, 56 & 84, the claimed limitation also reads on the disclosure of Ismail, that only the program with the highest priority, including space considerations is recorded at a particular time, which means that the instant program being recorded has exceeded that of the other programs with which there was a conflict.

Regarding the newly added claims 85, 99 & 113, the claimed features that correspond with subject matter mentioned above in the rejections of claims 1, 29 & 57, are likewise treated. As for the additional claimed feature of 'determining storage medium memory space and input scheduling conflict between programs in the list and future scheduled recording, so that the determining step generates a schedule of time versus available storage space that is optimal for the viewer's explicit or inferred programs, and schedules programs to be recorded that do not have storage memory space and conflict with other scheduled programs', the claimed feature reads on the discussion in Ismail that the recording of programs is subject to storage capacity constraints, so that programs with highest priority are recorded ahead of those with lower priority, if there is not enough storage space at a particular time, see Ismail col. 9, lines 59-67 thru col. 10, lines 1-31.

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Considering claims 88, 102 & 116, see Ismail col. 3, lines 66-67 & col. 10, lines 21-24, which teaches that the category-value pairs are indicative of a user's viewing preference.

Considering claims 93-94, 107-108 & 121-122, 'deriving a list of showings of programs of interest from the program guide' is met by Fig. 2 & Fig. 3 of Ismail, where the list of programs of interest is generated, see Ismail col. 9, lines 59-67. Wherein 'the determining step checks the list of showings for explicit or inferred program selections in an attempt to find a showing of the instant inferred or explicit programs that does not have conflicts, and if the showing does not have conflicts then it is scheduled for recording', reads on the operation of Ismail, (col. 1, lines 54-67 thru col. 2, lines 1-26 & col. 10, lines 1-31). Since Ismail discloses that programs are recorded subject to available space, if a scheduled program has no conflicts, then the instant program would be recorded.

Considering claims 98, 112 & 126, Ismail teaches that viewers have the option of canceling programs, if there is a conflict, col. 10, lines 50-62.

4. Claims 6-7, 10-11, 34-35, 38-39, 62-63, 66-67, 91-92, 105-106 & 119-120, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ismail & Rosin, in view of Wood, (US-PGPUB 2002/0054752 A1).

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Considering claims 6, 34 & 62, Ismail teaches managing the capacity of storage devices 106 at the user's terminal, which includes detecting the programs already stored and those scheduled to be recorded at a particular time, col. 10, lines 9-14. Ismail does not discuss providing an input schedule that tracks the free and occupied time slots for each input source. Nevertheless, Wood, which is in the same field of endeavor as Ismail discloses recording one or more broadcast programs that meets a subscriber's criteria of programming content, Para [0010] & Para [0037]. Wood goes on to teach that there may be a single or plural video input sources 106 that provide the broadcasts to the subscriber, and that if multiple sources are available at a particular time, then multiple recordings may take place simultaneously.

Wood determines that if sufficient input sources are not available to allow recordings of all the shows that meet the criteria, then the shows are recorded based upon their priority, which reads on the claimed limitation of tracking the free and occupied time slots of each of the input sources; see Para [0038]. It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Ismail with the feature of tracking availability of input sources for recording programs, as taught by Wood, at least for the desirable advantage of determining on only using those sources that are available.

Considering claims 7, 35 & 63, Ismail teaches detecting the amount of recording space available on the storage devices 106, which reads on subtracting the sum of all occupied space at particular time, from the total capacity of storage space already in use, col. 10, lines 3-14.

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Considering claims 10, 38 & 66, the claimed subject matter reads on the combination of Ismail (col. 10, lines 11-14) & Wood (Para [0038]). Wood teaches only recording from input sources that are available at least at the time the recording, while Ismail teaches insuring that a resource is available for the duration of the recording before beginning to use it.

Considering claims 11, 39 & 67, the claimed subject matter is consistent with the previously cited teachings of Wood, since only those inputs that are available for recording during a particular time, can be used for recording during the instant particular time.

Considering claims 91-92, 105-106 & 119-120, Ismail teaches insuring that a resource is available for the duration of the recording before beginning to use it, col. 10, lines 10-14. However Wood determines that if sufficient input sources are not available to allow recordings of all the shows that meet the criteria, then the shows are recorded based upon their priority, which reads on the claimed subject matter; see Para [0038]. It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Ismail with the feature of ensuring that there is an input available for recording programs and that the input is available for the duration of the program, as taught by Wood, at least for the desirable advantage ensuring that the instant program is successfully recorded in its entirety.

**Any response to this action should be mailed to:**

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**or faxed to:**

(571) 273-8300, (for formal communications intended for entry)

**Or:**

(571) 273-7290 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reuben M. Brown whose telephone number is (571) 272-7290. The examiner can normally be reached on M-F (9:00-6:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on (571) 272-7294. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communications and After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Reuben M. Brown



REUBEN M. BROWN  
PATENT EXAMINER